

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (canceled)
2. (currently amended) The apparatus as claimed in Claim 20 wherein said roller comprises a stainless steel cylinder; and a plastic sleeve that is shrunk on to said cylinder.
3. (previously presented) The apparatus as claimed in Claim 20 further comprising a second drive mechanism connected to drive said roller.
4. (canceled)
5. (previously presented) The apparatus as claimed in Claim 20 wherein at least one of said plurality of inlets is attached to a corresponding adjustable valve.
6. (currently amended) The apparatus as claimed in Claim 20 wherein said manifold is removably mountable from adjacent said endless casting belt so that more than one type of manifold may be interchangeably mounted adjacent said endless casting belt.
7. (canceled)
8. (currently amended) The manifold as claimed in Claim 21 wherein said roller comprises a stainless steel cylinder; and a plastic sleeve that is shrunk on to said cylinder.
9. (previously presented) The manifold as claimed in Claim 21 further comprising a drive mechanism connected to drive said roller.
10. (canceled)

11. (previously presented) The manifold as claimed in Claim 21 wherein at least one of said plurality of inlets is attached to a corresponding adjustable valve.

12. (previously presented) The manifold as claimed in Claim 21 wherein said roller is set a fixed distance from the casting belt and a space is formed between a surface of the roller and the casting belt.

13. (currently amended) The manifold as claimed in Claim ~~24~~12 wherein said fixed distance from the casting belt determines the final sheet thickness of said material.

14. (currently amended) The manifold as claimed in Claim 21 wherein ~~the~~ tandem movement of said roller and said casting belt draws the starting material from said manifold.

15. (previously presented) The manifold as claimed in Claim 21, wherein said manifold is removable so that more than one type of manifold may be interchangeably mounted in said mounting area.

16-18. (canceled)

19. (currently amended) A method for forming a thin continuous sheet of material from a molten, viscous cheese starting material comprising the steps of:

- a. driving a casting belt of a casting line in a constant direction;
- b. introducing said molten, viscous cheese starting material under a pressure of at least 1 psi through a plurality of inlets into a chamber of a manifold mounted in an area so that the manifold sits adjacent to the casting belt at a fixed distance and disposes said molten, viscous cheese starting material onto said casting belt through an outlet;
- c. driving a roller in the same direction as said casting belt, said roller being attached to said manifold downstream of said outlet and above said

outlet such that said molten, viscous cheese starting material passes between said roller and said casting belt;

d. drawing the molten, viscous cheese starting material from said chamber under pressure through the tandem movement of the roller and the casting belt in the same direction;

e. dispensing a continuous sheet of material upon the casting belt as the casting belt is revolvingly driven; and

f. cooling said continuous sheet of material on said casting belt.

20. (currently amended) An apparatus for forming a continuous sheet from a molten, viscous material comprising:

a pump providing a pressure for molten, viscous material so as facilitate uniform transfer of said material to a plurality of inlets opening into a discharge manifold for receiving said material under pressure;

said discharge manifold comprising a roller and a hollow interior chamber for receiving said molten, viscous material from said pump via said inlets and a discharge opening on at least one side for discharging said molten, viscous material under pressure;

a casting line positioned downstream of said discharge manifold comprising an endless casting belt that transports said molten, viscous material upon said endless casting belt, said endless casting belt having a width;

said endless casting belt mounted adjacent to said manifold, said endless casting belt facing said discharge opening, said roller rotatably mounted adjacent said endless casting belt to form a gap between an outer surface of said roller and the surface of said endless casting belt and said manifold disposed such that said molten, viscous material is received in said gap from said discharge opening, said endless casting belt being revolving driven such that said molten, viscous material passes between said gap, said pump providing sufficient pressure to said molten, viscous material to form a continuous sheet of molten, viscous material therebetween evenly distributed across said width of

said endless casting belt, wherein said molten, viscous material cools on said endless casting belt; and

a first drive mechanism connected to said endless casting belt for causing said endless casting belt to revolve.

21. (currently amended) A manifold for forming a continuous sheet from a molten, viscous material exiting the manifold under pressure upon a casting belt of a casting line moving in a first direction, said manifold comprising:

a roller positioned such that a longitudinal axis of said roller is perpendicular to the first direction of said casting belt;

said casting line positioned downstream of said manifold for transporting said molten, viscous material upon said casting belt, wherein said molten, viscous material cools on said casting belt;

a chamber, having an interior portion, disposed adjacent to said roller;

said chamber having top, bottom, end, upstream and downstream ~~faces~~ plates;

said bottom face open to the casting belt along at least a part of the length of said bottom face;

said downstream face open to the roller along at least a part of the length of said downstream face;

said top face having a plurality of inlets extending into said interior portion;

said manifold being removably mountable adjacent said casting belt in at least one mounting area.

22. (currently amended) A method for forming a thin continuous sheet of material from a molten, viscous starting material comprising the steps of.

a. driving a casting belt of a casting line in a constant direction, said casting belt having a width;

b. introducing said starting material under pressure through a plurality of inlets into a chamber of a manifold mounted in an area so that the

manifold sits adjacent to the casting belt at a fixed distance and disposes said starting material onto said casting belt through an outlet;

c. driving a roller in the same direction as said casting belt, said roller being attached to said manifold downstream of said outlet and above said outlet such that said starting material passes between said roller and said casting belt;

d. drawing the starting material from said chamber through the tandem movement of the roller and the casting belt in the same direction;

e. dispensing a continuous sheet of material under sufficient pressure upon the casting belt as the casting belt is revolvingly driven to evenly distribute the sheet of material across said width of the casting belt; and

f. cooling said continuous sheet of material on said casting belt.

23. (currently amended) An apparatus for forming a continuous sheet from a molten, viscous material comprising:

a pump connected to a line comprising a valve to regulate the flow of said molten, viscous material under pressure to a plurality of inlets;

a pressurized discharge manifold, said manifold comprising a roller and a hollow interior chamber, said chamber having a plurality of inlets for receiving said molten, viscous material under pressure from said pump and a discharge opening on at least one side for discharging said molten, viscous material under pressure;

a casting line positioned downstream of said discharge manifold and comprising an endless casting belt that transports said molten, viscous material upon said endless casting belt;

said endless casting belt mounted adjacent said manifold, said endless casting belt facing said discharge opening, said roller rotatably mounted adjacent said endless casting belt to form a gap between an outer surface of said roller and the surface of said endless casting belt and said manifold disposed such that said molten, viscous material is received in said gap from said discharge opening, said endless casting belt being revolving driven such that

said molten, viscous material passes between said gap to form said continuous sheet of molten, viscous material therebetween, wherein said molten, viscous material cools on said endless casting belt; and

a first drive mechanism connected to said endless casting belt for causing said endless casting belt to revolve.

24. (currently amended) The apparatus as claimed in Claim 23 wherein said roller comprises a stainless steel cylinder; and a plastic sleeve that is shrunk on to said cylinder.

25. (previously presented) The apparatus as claimed in Claim 23 further comprising a second drive mechanism connected to drive said roller.

26. (canceled)

27. (currently amended) The apparatus as claimed in Claim 23 wherein said manifold is removably mountable from adjacent said endless casting belt so that more than one type of manifold may be interchangeably mounted adjacent said endless casting belt.

28. (currently amended) A method for forming a thin continuous sheet of material from a molten, viscous cheese starting material comprising the steps of:

- a. driving a casting belt of a casting line in a constant direction;
- b. providing a manifold, having at least one inlet that feeds into a chamber, said manifold mounted in an area so that the manifold sits adjacent to the casting belt at a fixed distance;
- c. providing a pump upstream of the manifold;
- d. pumping said molten, viscous cheese starting material under a pressure of at least 1 psi from the pump through the at least one inlet into the chamber of said manifold mounted so that the manifold disposes said molten, viscous cheese starting material onto said casting belt through an outlet;

e. driving a roller in the same direction as said casting belt, said roller being attached to said manifold downstream of said outlet and above said outlet such that said molten, viscous cheese starting material passes between said roller and said casting belt;

f. drawing the molten, viscous cheese starting material from said chamber under pressure through the movement of the roller and the casting belt in the same direction;

g. dispensing a continuous sheet of material upon the casting belt as the belt is revolvingly driven; and,

h. cooling said continuous sheet of material on said casting belt.

29. (currently amended) A method for forming a thin continuous sheet of material from a molten, viscous starting material comprising the steps of.

a. driving a casting belt of a casting line in a constant direction, said casting belt having a width;

b. introducing said starting material under pressure from a pump positioned upstream of a manifold through at least one inlet into a chamber of said manifold mounted in an area so that the manifold sits adjacent to the casting belt at a fixed distance and disposes said starting material onto said casting belt through an outlet;

c. driving a roller in the same direction as said casting belt, said roller being attached to said manifold downstream of said outlet and above said outlet such that said starting material passes between said roller and said casting belt;

d. drawing the starting material from said chamber through the tandem movement of the roller and the casting belt in the same direction;

e. dispensing a continuous sheet of material under sufficient pressure upon the casting belt as the casting belt is revolvingly driven to evenly distribute the sheet of material across said width of the casting belt; and,

f. cooling said continuous sheet of material on said casting belt.

30. (currently amended) An apparatus for forming a continuous sheet from a molten, viscous material comprising:

a pump disposed upstream of a discharge manifold, said pump providing a pressure for molten, viscous material so as facilitate uniform transfer of said material to said discharge manifold;

said discharge manifold comprising a roller and a hollow interior chamber, said interior chamber having at least one inlet for receiving said molten, viscous material under pressure from said pump via said at least one inlet and a discharge opening on at least one side for discharging said molten, viscous material under pressure;

a casting line positioned downstream of said manifold comprising an endless casting belt that transports said molten, viscous material upon said endless casting belt, said endless casting belt having a width;

said endless casting belt mounted adjacent to said manifold, said endless casting belt facing said discharge opening, said roller rotatably mounted adjacent said endless casting belt to form a gap between an outer surface of said roller and ~~the a~~ surface of said endless casting belt and said manifold disposed such that said molten, viscous material is received in said gap from said discharge opening, said endless casting belt being revolving driven such that said molten, viscous material passes between said gap, said pump providing sufficient pressure to said molten, viscous material to form a continuous sheet of molten, viscous material therebetween evenly distributed across said width of said endless casting belt, wherein said molten, viscous material cools on said endless casting belt; and,

a first drive mechanism connected to said endless casting belt for causing said belt to revolve.

31. (currently amended) The apparatus as claimed in Claim 30 wherein said roller comprises a stainless steel cylinder; and a plastic sleeve that is shrunk on to said cylinder.

32. (previously presented) The apparatus as claimed in Claim 30 further comprising a second drive mechanism connected to drive said roller.

33. (previously presented) The apparatus as claimed in Claim 30 wherein at least one inlet is attached to an adjustable valve.

34. (currently amended) The apparatus as claimed in Claim 30 wherein said manifold is removable so that more than one type of manifold may be interchangeably mounted adjacent said endless casting belt.

35. (previously presented) The apparatus as claimed in Claim 30 wherein said gap determines the final sheet thickness of said molten, viscous material.

36. (currently amended) The apparatus as claimed in Claim 30 wherein tandem movement of said roller and said endless casting belt draws the molten, viscous material from said manifold.

37. (currently amended) An apparatus for forming a continuous sheet from a molten, viscous material comprising:

a pump connected to a line comprising a valve to regulate the flow of said molten, viscous material under pressure to at least one inlet;

a pressurized discharge manifold positioned downstream of said pump, said discharge manifold comprising a roller and a hollow interior chamber, said chamber having at least one inlet for receiving said molten, viscous material under pressure from said pump and a discharge opening on at least one side of said chamber for discharging said molten, viscous material under pressure;

a casting line positioned downstream of said discharge manifold and comprising an endless casting belt that transports said molten, viscous material upon said endless casting belt;

said endless casting belt mounted adjacent said manifold, said endless casting belt facing said discharge opening, said roller rotatably mounted

adjacent said endless casting belt to form a gap between an outer surface of said roller and ~~the~~ a surface of said endless casting belt; and

said manifold disposed such that said molten, viscous material is received in said gap from said discharge opening, said endless casting belt being revolving driven such that said molten, viscous material passes between said gap to form said continuous sheet of molten, viscous material therebetween, wherein said molten, viscous material cools on said endless casting belt; and, a first drive mechanism connected to said endless casting belt for causing said endless casting belt to revolve.

38. (previously presented) The apparatus as claimed in Claim 37 wherein said roller comprises a stainless steel cylinder; and a plastic sleeve that is shrunk on to said cylinder.

39. (previously presented) The apparatus as claimed in Claim 37 further comprising a second drive mechanism connected to drive said roller.

40. (currently amended) The apparatus as claimed in Claim 37 wherein said manifold is removable so that more than one type of manifold may be interchangeably mounted adjacent said endless casting belt.

41. (previously presented) The apparatus as claimed in Claim 37 wherein said gap determines the final sheet thickness of said molten, viscous material.

42. (currently amended) The apparatus as claimed in Claim 37 wherein tandem movement of said roller and said endless casting belt draws the molten, viscous material from said manifold.

Amendments to the Drawings:

The attached formal drawings include replacement sheets for Fig. 1-7 and include the following changes to Fig. 1-3 and 5-7:

In Figure 1:

- (1) The surface of the belt 30 element has been repositioned.
- (2) Previously omitted elements 21A and 21B have been added in accordance with p. 6, lines 23-24.

In Figure 2:

- (1) The surface of the belt 30 element has been deleted.
- (2) The number 3 has been added (twice) to indicate the cross sectional view for FIG. 3.
- (3) The number 6 has been added (twice) to indicate the cross sectional view for FIG. 6.

In Figure 3:

- (1) Hatching for element 36 has been removed, since this element is defined by a gap (see e.g., p. 7, line 28 – p. 8, line 3).

In Figure 5:

- (1) The surface of the belt 30 element has been changed to top face plate 38.
- (2) The left element 32 has been deleted, since only the right element correctly designates the upstream face plate.
- (3) Element 17 has been repositioned to be consistent with Fig. 6.

In Fig. 6:

- (1) The width of the chamber cavity “a” has been replaced with “w” in accordance with the specification (p. 7, lines 3-4).

In Fig. 7:

- (1) A second drive mechanism element 20 has been added in accordance with the specification (p. 7, lines 9-11) and allowed claims 3, 9, 25, 32 and 39.

- (2) Drive mechanism element 17 (p. 6, lines 8-9) has been renumbered 19 to correct for element 17 being defined elsewhere as a stainless steel cylinder (see e.g. p. 7, lines 7-8; Fig. 5-6). Support for this element is provided in p. 6, lines 8-9 and allowed claims 20, 23, 30 and 37.

Attachment: Replacement Sheets (Fig. 1-7)
Annotated Sheets (Fig. 1-7) Showing Changes